MAR/FY06

DESERET CHEMICAL DEPOT
UTAH

Base Realignment & Closure Installation Action Plan

Final 6 September 2006

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Statement of Purpose

The purpose of the Base Realignment and Closure (BRAC) Installation Action Plan (BIAP) is to outline the total multi-year Cleanup Program for an installation. The plan identifies environmental cleanup requirements at each site or area of concern, and proposes a comprehensive, installation-wide approach, with associated costs and schedules, to conduct investigations and necessary remedial actions.

In an effort to coordinate planning information between the restoration manager, US Army Environmental Center (USAEC), Deseret Chemical Depot, BRAC Division, executing agencies, and regulatory agencies, an IAP was completed. The IAP is used to track requirements, schedules and tentative budgets for all Army installation cleanup programs.

All site-specific funding and schedule information has been prepared according to projected overall Army funding levels and is, therefore, subject to change.

The following agencies contributed to the formulation and completion of this Installation Action Plan at the IAP Workshop held March 22, 2006:

Corps of Engineers, Sacramento
Deseret Chemical Depot
Engineering & Environment Inc., for USAEC
Kleinfelder
Utah Department of Environmental Quality
Versar/US Army Environmental Center

Acronyms & Abbreviations

AEDB-R	Army Environmental Database Restoration (replaced DSERTS in 2003)
AMC	Army Materiel Command
Bldg	building
BRAC	Base Realignment and Closure
CAMDS	Chemical Agent Munitions Disposal System
CAP	Corrective Action Permit
CC	Compliance-Related Cleanup
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMA	Chemical Materials Agency
CMD	Corrective Measure Design
CMI(C)	Corrective Measure Implementation (Construction)
CMS	Corrective Measure Study
CS	Confirmatory Sampling
CTC	Cost-To-Complete
CTT	Closed, Transferred, or Transferring
DES	Design
DCD	Deseret Chemical Depot
DD	Decision Document
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EOD	Explosive and Ordnance Disposal or Detachment
EPA	(United States) Environmental Protection Agency
ER,A	Environmental Restoration, Army (formally called DERA)
FS	Feasibility Study
FY	Fiscal Year
GIS	Global Information System
IAP	Installation Action Plan
IRA	Interim Remedial Action
IRP	Installation Restoration Program
LTM	Long-term Management
MC	Munitions Constituents
MCL	Maximum Contaminant Level
MEC	Munitions Explosive Constituents
MMRP	Military Munitions Response Program
NE	Not Evaluated
NFA	No Further Action
NPL	National Priorities List
OB/OD	Open Burning/Open Detonation
OE	Ordnance Explosives
OMF	Oquirrh Mountain Facility (changed to CAMDS)
PA	Preliminary Assessment
PCB	Polychlorinated biphenyl
POL	Petroleum, Oil & Lubricants
PVC	poly vinyl chloride

Acronyms & Abbreviations

RA	Remedial Action
RA(C)	Remedial Action - Construction
RA(O)	Remedial Action - Operation
RAB	Restoration Advisory Board
RAC	Risk Assessment Code
RC	Response Complete
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
REM	Removal Action
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RI	Remedial Investigation
RIP	Remedy in Place
ROD	Record of Decision
RRSE	Relative Risk Site Evaluation
SBCCOM	Soldier, Biological and Chemical Command
SI	Site Inspection
STP	Sewage Treatment Plant
SVOC	Semi-Volatile Organic Compound
SWMU	Solid Waste Management Unit
TAPP	Technical Assistance for Public Participation
TCA	Tooele Chemical Activity
TCE	Trichloroethylene/ Trichloroethane
TCLP	Toxicity Characteristic Leaching Procedure
TEAD	Tooele Army Depot
TEAD(S)	AEDB-R classification code for DCD sites
TNT	type of explosive
TOCDF	Tooele Chemical Agent Disposal Facility
TPH	Total Petroleum Hydrocarbon
TRC	Technical Review Committee
UDEQ	Utah Department of Environmental Quality
USACE	United States Army Corps of Engineers
USACHPPM	United States Army Center for Health Promotion and Preventive Medicine
USAEC	United States Army Environmental Center
USAEHA	United States Army Environmental Hygiene Agency (changed to USACHPPM)
USATHAMA	United States Army Toxic and Hazardous Materials Agency (changed to USAEC)
UT	Utah
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound

AEDB-R to Alias CONVERSION

SWMU	AOC	AEDB-R #
SWMU 1	Eastern Demil/ Disposal Pits	TEAD(S)-01
SWMU 2	Gravel Pit Area	TEAD(S)-02
SWMU 3	Disposal Pit	TEAD(S)-03
SWMU 5	Building 600 Foundation, Drainage, Pond & Ditch	TEAD(S)-05
SWMU 8	Surveillance Test Site	TEAD(S)-26
SWMU 9	Old Area 2 (Including Mustard Holding & Pit Areas)	TEAD(S)-09
SWMU 11	Chemical Munitions Storage Area (Area 10)	TEAD(S)-11
SWMU 13	CAMDS Facility	TEAD(S)-12
SWMU 14	Building 5108 (Former Motor Pool)	TEAD(S)-27
SWMU 15	Old Demolition Pit (Under Building C-4002)	TEAD(S)-13
SWMU 17	Deactivation Furnace	TEAD(S)-14
SWMU 19	Building 533 (Empty Drum Storage)	TEAD(S)-28
SWMU 20	Building 520 (Crating Facility)	TEAD(S)-29
SWMU 21/22	Incendiary Washout Operations (Bldg 554) & Basins	TEAD(S)-15
SWMU 23	Demilitarization Holding Area (North of SWMU 1)	TEAD(S)-16
SWMU 25	Western Demil Area/ Disposal Pits	TEAD(S)-22
SWMU 26	Sanitary Landfill	TEAD(S)-17
SWMU 27	Sewage Treatment Plant	TEAD(S)-18
SWMU 28	Inactive Landfill	TEAD(S)-19
SWMU 29	Metal Scrap Landfill	TEAD(S)-20
SWMU 30	CAMDS Landfill	TEAD(S)-23
SWMU 31	Demilitarization Area (Northeast of SWMU 1)	TEAD(S)-24
SWMU 32	Railroad Scrap Yard	TEAD(S)-21
SWMU 33	Building 536 (CAMDS Salt Storage)	TEAD(S)-30
SWMU 34	Building 4105 (Carbon Storage)	TEAD(S)-31
SWMU 36	Building 3200 & Surrounding Area	TEAD(S)-08

Installation Information

Installation Locale: Deseret Chemical Depot is located on 19,364 acres and is approximately 50 miles southwest of Salt Lake City in Rush Valley in Tooele County, UT. The area surrounding Deseret Chemical Depot is a sparsely settled, rural area. Population density is approximately three persons per square mile in the valley, with nearly the entire population concentrated in a few communities. The small towns in the vicinity of Deseret Chemical Depot, including Clover, St. John, Faust, Ophir, Vernon, Big Hollow, Hogans Ranch, and Stockton, have a combined population of approximately 1200.

Installation Size:
Installation Acreage: 19,364 acres
BRAC Acreage: 19,364 acres
Acreage being transferred to other service: None
Acreage being transferred to other federal agencies: 19,364 acres
Acreage being transferred to non-federal agencies: None

List of Off Post Properties: None

Environmental Condition of Property: TBD
Acres in Category 1: TBD
Acres in Category 2: TBD
Acres in Category 3: TBD
Acres in Category 4: TBD
Acres in Category 5: TBD
Acres in Category 6: TBD
Acres in Category 7: TBD

Lead Organization:
US Army Materiel Command (AMC)

Lead Executing Agencies: Corps of Engineers, Sacramento
Investigation Phase: RFI Phase II for SWMU 1 and 25, VOC investigation at SWMU 26
Remedial Action Phase: Remedial Action at SWMU 3

Regulatory Participation:
Federal: US Environmental Protection Agency (EPA), Region VIII
State: Utah Department of Environmental Quality (UDEQ)

BRAC Closure Round: BRAC November 2005

Status of Redevelopment Initiative (Reuse Plan): TBD

Organization Name: TBD
Plan Status: TBD
Development Plan Date: TBD

Existing Legal Agreements/Interim Leases: TBD

Significant Base Tenants: None

Projected Date of Final Transfer of Property: TBD

National Priorities List (NPL) Status: There are no NPL sites at Deseret Chemical Depot

Installation Restoration Advisory Board (RAB)/Technical Review Committee (TRC)/Technical Assistance for Public Participation (TAPP) Status: Deseret Chemical Depot has an active RAB.

Installation Program Summaries

IRP

Primary Contaminants of Concern: Metals, organics and the potential for chemical agents and their breakdown products
Affected Media of Concern: Soil, Groundwater
Estimated Date for Response Complete (RC): 2008
Funding to Date (up to FY05): $21,957K
Current Year Funding (FY06): $0
Cost-to-Complete (FY07+): $1,134K

MMRP

Primary Contaminants of Concern: UXO
Affected Media of Concern: Soil
Estimated Date for RC: 2017
Funding to Date (up to FY05): $273K
Current Year Funding (FY06): $12K
Cost-to-Complete (FY07+): $185,290K

Transfer Summary

Total Installation Acres: 19,364 acres

BRAC Acres: 19,364 acres

Parcel Name: TBD
Recipient organization: Tooele Army Depot
Acres: 19,364 acres
Transfer strategy: Realignment
Current land use: Industrial
Future land use: Industrial
Transfer date: TBD

Cleanup Program Summary

Installation Historic Activity:

During World War II, the Defense Department ordered the construction of a storage depot for chemical agents. This facility was named the Deseret Chemical Depot. The storage facility included 140 igloos, 2 magazines, 7 warehouses, 32 storage sheds for toxic material, and several transitory storage shelters.

In May 1955, Deseret Chemical Depot (DCD) was redesignated the Deseret Depot Activity and placed under the command of Tooele Army Depot (TEAD). In 1962, the Depot Activity became part of TEAD and was designated as the South Area. In October 1995, the South area was made a separate installation from TEAD and was named as Tooele Chemical Activity (TCA). In October 1996, TCA was officially changed back to the original name as Deseret Chemical Depot.

The primary mission of DCD is to:

- Plan and execute the storage and destruction of chemical weapons and disposal of their secondary waste in a manner that is safe, secure, environmentally sound, and protect workers and the public.
- Plan and complete depot closure/realignment while providing an effective transition for the work force.

On 30 June 89, the State of Utah issued a Resource Conservation and Recovery Act (RCRA) Hazardous Waste Permit for the Chemical Stockpile Disposal Plant. Attached to this Permit was a Corrective Action Permit (CAP) for 28 Solid Waste Management Units (SWMUs). The CAP divided the SWMUs into known releases and suspected releases units and set schedules for the implementation of investigations and cleanups under RCRA. In 1991, a 29th SWMU was added to the Permit.

The CAP was requested to be moved from the TOCDF permit to the DCD RCRA hazardous waste permit and was approved in November 2000.

DCD has initiated a program to integrate planning, decision, and implementation of restoration at DCD. DCD calls this program “Team Deseret.” The purpose of Team Deseret is to stimulate interaction among the key players, both government and non-government, in the restoration program at DCD. In addition, it is anticipated that local communities and governments will have greater input into the restoration process because of Team Deseret. Members of Team Deseret will include people from DCD, UDEQ, Product Manager for Non-Stockpile Chemical Materiel, USACE, EPA, US Army Environmental Center (USAEC), CAMDS, local universities, and other state/local agencies.

Current Activity:

None

Cleanup Program Summary

IRP

- Prior Year Progress: The current action under IRP for DCD is to complete the Phase II RFI for SWMUs 1 and 25.
- Future Plan of Action: There is further investigation at SWMU 26 to determine the extent of VOC contamination, and at SWMU 3 determination for agent and breakdown product. LTM is continuing with annual events in the fall.

MMRP

- Prior Year Progress: SI has been completed
- Future Plan of Action: None until 2010

Cleanup Exit Strategy

Free product removal will be conducted followed by installation and operation of a bioventing system. In situ bioremediation is planned for the groundwater contamination. Continue installation-wide groundwater monitoring.

DESERET CHEMICAL DEPOT

BRAC

Parcel & Site Descriptions

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Installation Restoration Program

Total AEDB-R IRP Sites/AEDB-R Sites with Response Complete: 27/17

Different Site Types:

1 Surface Disposal Area	2 Chemical Disposal	1 Drainage Ditch
1 Disposal Pit/ Dry Well	1 Leach Field	5 Landfills
4 Storage Areas	1 Surface Impoundment/ Lagoon	
5 Spill Site Areas	1 Waste Treatment Plant	

4 Explosive Ordnance Disposal Areas
1 Unexploded Munitions / Ordnance

Most Widespread Contaminants of Concern: Metals, organics and the potential for chemical agents and their breakdown products

Media of Concern: Soil, Groundwater

Completed Removal (REM)/Interim Remedial Action (IRA)/Remedial Action (RA):
- REM - Solid waste in1990, non-ER,A funds
- REM - Cr-contaminated soil (date unknown), non-ER,A funds
- IRA - TEAD(S)-14 (SWMU 17) Hg-contaminated soil in1990, $185,700

Total IRP Funding

Prior Years (up to FY05):	$ 21,957K
Current Year Funding (FY06):	$ 0
Future Requirements (FY07+):	$ 1,134K
Total:	$ 23,091K

Duration of IRP
Year of IRP Inception: 1979
Year of IRP RC: 2008
Year of IRP Completion including Long-Term Management (LTM): 2015

IRP Contamination Assessment

IRP Contamination Assessment Overview

Past operations at DCD have resulted in the generation of various types of contaminants and their disposal across the installation. Solvents, heavy metals and explosives are the primary contaminants, with chemical agent breakdown products being detected at several sites.

An initial Installation Assessment (December 1979) and a follow up investigation Exploratory Survey (1982) investigated contamination. The conclusion of these investigations was that DCD was generally uncontaminated except for arsenic and gross-alpha and gross-beta radiation. The arsenic was hypothesized to be naturally occurring (exacerbated by local flooding that washed mine tailings from nearby mountains). Because there was no evidence or record of use, storage, or disposal of any radioactive material at DCD, this radiation was attributed to naturally occurring radionuclides.

The US Army Center for Health Promotion and Preventive Medicine (USACHPPM) (formerly known as the US Army Environmental Hygiene Agency), prepared a SWMU Evaluation report in 1987 on all SWMUs at DCD to identify data gaps in the existing database for the RCRA Part B Application that was pending for CAMDS. The EPA performed a RCRA Facility Assessment at DCD in August 1987.

Since much information had been discovered since the Initial Assessment was prepared in 1979, and many changes to environmental laws had been enacted, a site-wide preliminary assessment/site investigation (PA/SI) was completed in 1988. Seventeen sites at DCD were investigated. Four of the highest priority sites recommended for further study in the PA/SI were included in a Remedial Investigation in 1990. These sites were CAMDS Sites (TEAD[S]-12, SWMU 13), the Area 2 (TEAD[S]-09, SWMU 9), the Deactivation Furnace (TEAD[S]-14, SWMU 17), and the South General and Perimeter Areas.

Following the issuance of the CAP in 1989, the focus of the studies changed from the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) to RCRA. Of the 29 SWMUs listed in the permit, two are categorized as Known Releases and the remaining 27 are grouped together as Suspected Releases. For the current status of these sites, see the Site Description Section (there are only 3 sites still requiring significant cleanup action.)

Installation wide groundwater monitoring has shown only low levels of contamination. This requires continued monitoring. No off-post contamination has been detected.

Cleanup Exit Strategy:

The current action under IRP for DCD is to complete the Phase II RFI for SWMUs 1 and 25. Also, there is further investigation at SWMU-26 to determine the extent of VOC contamination and at SWMU 3 to determine agent and agent breakdown product. LTM is continuing with annual events in the fall.

Previous Studies

1979
- USATHAMA: Environmental Assessment of Tooele Army Depot, Report # 141: December

1982
- USEPA and EPIC: Environmental Photographic Interpretation Center Report
- ERTEC: Exploratory Environmental Contamination Assessment Report
- Inland Pacific Engineering Co: Installation Environmental Assessment: June

1983
- TEAD Facilities Engineering: Analysis of Existing Facilities/Environmental Assessment Report: May

1985
- CH2M Hill: Monitoring Activity and Waste Disposal Review and Evaluation: January
- Department of the Army: A Study of Environmental Balance March
- CDM: Performance of Remedial Response Activities at Uncontrolled Hazardous Waste Sites - Final Plan: March
- TEAD Facilities Engineering: Analytical/Environmental Assessment Report: November

1986
- USAEHA: SWMU Evaluation
- USEPA and EPIC: Environmental Photographic Interpretation Center Report Addendum: July

1987
- NUS Corporation: Draft Interim RCRA Facility Assessment: August
- NUS Corporation: Interim RCRA Facility Assessment Final - December

1988
- EA Engineering Science and Technology: Preliminary Assessment/Site Investigation Report: December

1989
- Donohue & Associates: RCRA Facility Assessment Summary Report - October

1990
- EBASCO: Phase I RFI Summary Report for Known Releases Units: March
- Donahue & Associates: RCRA Facility Investigation Phase I Final Summary Report for Known Releases Units – 30 March

1991
- Roy F. Weston: Final Remedial Investigation Report: January

Previous Studies

1993

- EBASCO: RCRA Facility Investigation – Phase I for Suspected Releases Revised Final Report Volume I – Text - July

1995

- EBASCO: Interim Final RFI Report for Group 1 Suspected Releases: November
- SAIC: Draft Phase II RFI Report for Group 3 SWMUs: December

1996

- Jabco's Engineering: Remedial Design for RCRA Sites: March
- Jacobs Engineering & Kleinfelder: Remedial Design for Two RCRA Sites at TCA, Volume I - July
- Davy International: Remedial Action Work Plan for Two RCRA Sites: October

1997

- Rust Environment & Infrastructure: Final Corrective Measures Study Work Plan for the Known Releases SWMUs: January
- Rust Environment & Infrastructure: Final Phase II RCRA Facility Investigation Report, Known Releases SWMUs 13 & 17: April
- USACHPPM: Hazardous and Medical Waste Study, Relative Risk Site Evaluation, Deseret Chemical Depot: April
- Foster Wheeler: Addendum to the Final Phase II RFI Report: December

1998

- USACHPPM: Relative Risk Site Evaluation Scores for Five "Not-Evaluated" Sites at Deseret Chemical Depot: January
- Kleinfelder: Addenda to Project Workplans Sampling for Elevated Barium Concentrations in Soil – February
- Rust Engineering & Infrastructure: Revised Final Corrective Measure Study Work Plan for SWMU 13 and 17 - May
- Kvaerner Environmental: Remedial Action at the Metal Scrap Landfill Site (SWMU 29): July

1999

- Kleinfelder: Sampling for Elevated Barium Concentrations in Soils at SWMU 22: January
- Foster Wheeler: Revised Final Phase II RFI Report for Group 2 SWMUs: February
- Foster Wheeler: Final CMS Work Plan for Group 2 SWMUs: August
- Foster Wheeler: Final CMS Report for Group 2 SWMUs: October
- Foster Wheeler: Final DD for Group 2 SWMUs: December

2000

- Dames & Moore: Final CMS for Known Release SWMU 13: June
- Dames & Moore: Final CMS for Known Release SWMU 17: June
- URS: Final Corrective Measure Study (Report) for Known Releases SWMU 3 - June

2001

- Dames & Moore: Final DD for Known Release SWMU 13: April
- Dames & Moore: Final DD for Known Release SWMU 17: April
- Kleinfelder: CMS for Elevated Barium at SWMU 22: April
- URS: Revised Final Decision Document for Known Releases SWMUs – April
- SAIC: Phase II RCRA Facility Investigation for Group 3 Suspected Releases Solid Waste Management Units Volume I – Final Report - August

2002

- URS: CMS for SWMUs 11, 19, 20, 33, and 37: July
- URS: DD for SWMUs 11, 19, 20, 33, and 37 : July
- USACE: Draft Work Plan for SWMU 19: July
- Parsons: Draft Work Plan SWMU 9/30: September
- Kleinfelder: Phase II RCRA Facility Investigation Report for SWMU 22: September
- Tetra Tech: Final corrective measure Work Plan for SWMU 5: November
- Parsons & DCD: Final Work Plan for SWMU 3: December

2003

- Kleinfelder: Revised Final CMS Design Work Plan for SWMU 8: January
- North Wind, Inc.: Preconstruction documents for the 2002 Remedial Action at SWMU 5: February
- Kleinfelder: Final Phase II RCRA Investigation Report for SWMU 22 – March
- Kleinfelder: Draft Corrective Measures Completion Report for SWMU 37: June
- Kleinfelder: Corrective Measures Completion Report for SWMU 37: July
- Kleinfelder: Corrective Measures Completion Report for SWMU 08: November
- Kleinfelder: Corrective Measure Study for SWMU 22 – December

2004

- Kleinfelder: Final Corrective Measures Design Work Plan SWMU 22 – January
- North Wind: Corrective Measures Completion Report for SWMU 5 – July
- Kleinfelder: Final Corrective Measures Completion Report SWMU 22 - December

2005

- Kleinfelder: Decision Document SWMU 22 – April

2006

- Parsons: Addendum to Remedial Action at SWMU 3 – January,
- Northwind: Final Work Plan for the Investigation of VOC Contamination in GW at SWMU 26 – March.

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Installation Restoration Program

Site Descriptions

TEAD(S)-01, SWMU 1
DEMIL AREA/MOTAR PITS

SITE DESCRIPTION

This SWMU contains approximately 130 disposal pits and trenches within a fenced area of approximately 373 acres along the southern fence on the installation. These pits were used to destroy and dispose of explosive and chemical munitions from 1945 to 1978. There is ordnance scrap and the potential for Unexploded Ordinance (UXO) on the surface. There is a potential for agent-contaminated materials and UXOs below surface in the burial pits. (The US Army Program Manager for Chemical Demilitarization has included this SWMU in their Non-Stockpile Survey and Analysis Report.)

Limited samples have been taken at this site; no COCs were detected in soil. Groundwater monitoring has not detected any chemical agent breakdown products or any other chemicals of concern at significant levels.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: Medium

PROGRAM: IR

CONTAMINANTS OF CONCERN: Chemical Munitions, Agents, Explosives

MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200809

RC Date: 200809

The Army performed an ordnance sweep and removal of SWMU 1 and adjacent off-post properties. Surface clearance of roadways in 2003-05 and discovered Chemical Agent Identification Set (CAIS) in addition to conventional munitions and OE scrap.

CLEANUP STRATEGY

Groundwater monitoring will continue as part of the installation-wide groundwater monitoring program. Future funding for this site will be covered under TEAD(S)-17, SWMU 26. A site surface sweep for ordnance will continue over the next few years. It is assumed that a limited number of munitions will require destruction at an existing DCD facility. The Phase II RFI will be completed to describe risk for the site and consist of soil (planned for FY07) and soil gas sampling (field work planned for summer 2006) at many selected locations throughout the 373 acres, and mapping of pit locations and an UXO non-intrusive survey. Institutional controls, such as fencing improvements, will be implemented (planned for FY08). Maintain the installation-wide GIS system that was started in FY03.

It is assumed that chemical agent or breakdown products will be discovered during the summer 2006 sampling and that remediation of that will need to be addressed under the IRP. Then this site will be transferred to the Military Munitions Response Program (as DCD-02-R-01) and the UXO will be addressed under that program.

TEAD(S)-02, SWMU 2
GRAVEL PITS

SITE DESCRIPTION

This SWMU, covering 1 acre, was reported to be used for burial of high explosive and chemical agent munitions without demilitarization. SWMU 2 is located within SWMU 11 (Chemical Munitions Storage Area [Area 10], TEAD(S)-11), the current chemical munitions storage area.

The Phase I RFI samples found no contamination in the surface soil samples. Groundwater testing revealed no releases.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: Low

PROGRAM: IR

CONTAMINANTS OF CONCERN: Chemical Munitions, Agents, Explosives

MEDIA OF CONCERN: Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200506

RC Date: 200506

CLEANUP STRATEGY

Groundwater monitoring will continue as part of the installation-wide groundwater monitoring program through 2008. Institutional controls will be maintained, and possibly modified upon conclusion of the chemical storage mission. This site will be transferred to the Military Munitions Response Program (MMRP) in FY08/09. Additional cleanup strategy is discussed under MMRP site DCD-003-R-01.

Future funding for groundwater monitoring for this site will be covered under TEAD(S)-17, SWMU 26.

TEAD(S)-03, SWMU 3
DISPOSAL PIT

SITE DESCRIPTION

This SWMU is located in the southeastern corner of the installation and is approximately 200 x 10 ft. The area was reported to have been used for maintenance of leaking chemical munitions and it was also identified as the site of a 1960s nerve agent spill.

The RFI found metals in the soil and low levels of metals and VOCs in groundwater. The trench was not sampled due to the possible presence of chemical agents.

A surface UXO survey was completed in FY02.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: High

PROGRAM: IR

CONTAMINANTS OF CONCERN:
VOCs, Metals, Agents

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200109
IRA	199506	199509
DES	200106	200306
CMI(C)	200306	200809

RC Date: 200809

CLEANUP STRATEGY

Complete a geophysical survey and angle borings to sample soil beneath the trench (funded). If UXO is suspected, it is assumed that this site will be capped with LUCs being implemented. If no UXO is suspected, test pits and additional soil sampling may be required. Groundwater monitoring will continue under the installation-wide groundwater monitoring program. Future funding for this site will be covered under TEAD(S)-17, SWMU 26. Additional soil sampling will be funded under SWMU 3.

TEAD(S)-05, SWMU 5
DRAINAGE, POND & PIT, BUILDING 600

SITE DESCRIPTION

Building 600 activities included chemical munitions and white phosphorus grenades renovation as well as the washout of high explosive cluster bombs from the late 1940s to early 1970s. The waste was drained to an unlined drainage pond (approximately 100 x 50ft) east of the building. In addition, paint constituents and chromic acid were listed as potential contaminants in the groundwater and soil.

RFI sampling detected metals and VOCs in the soil. Recent sampling has not detected any contaminants of concern in groundwater.

The CMI Workplan was finalized in September 2002. Hot spots were removed and backfilled with clean soil (FY04). A closure report was completed in 2004. A Human Health Risk Assessment is being prepared for this site.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: Medium

PROGRAM: IR

CONTAMINANTS OF CONCERN:
Chromium, VOCs

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200109
IRA	199506	199509
DES	200106	200209
CMI(C)	200208	200309

RC Date: 200309

CLEANUP STRATEGY

Groundwater monitoring will continue under the installation-wide groundwater monitoring program. Future funding for this site will be covered under TEAD(S)-17, SWMU 26.

TEAD(S)-09, SWMU 9 AREA 2 (INCLUDING MUSTARD HOLDING & PIT AREAS)

SITE DESCRIPTION

This approximately 50-acre site is located on the east central portion on the Depot (north of SWMU 8, west of SWMU 34). This site includes the Area 2 Mustard Holding Area (Chemical Ammo Safeguarding Area) (40-acres) and the Open Storage of Agent Container and Burn Pits Area (10-acres) just south of Area 2. The site is completely fenced.

Both areas were used to store munitions containing mustard, chemical agent identification sets, and war gas identification sets. All storage containers were removed prior to 1986.

The Burn Pits were used sometime between 1940 and 1970.

Previous soil samples indicated heavy metals and agent breakdown product in the Burn Pits. No contaminants of concern were detected in the soil of Area 2. Groundwater samples taken from ~400ft down gradient (closest well) have not detected any contaminants of concern.

The fence was expanded to include the Burn Pit Area and one additional well was installed down gradient (late FY03).

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: Medium

PROGRAM: IR

CONTAMINANTS OF CONCERN:
Metals, Agent Breakdown Products

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200109
DES	200106	200209
CMI(C)	200209	200305

RC Date: 200306

CLEANUP STRATEGY

Groundwater monitoring will continue under the installation-wide groundwater monitoring program. Future funding for this site will be covered under TEAD(S)-17, SWMU 26.

TEAD(S)-15, SWMU 21 & 22 BLDG S-554 (INCENDIARY WASHOUT OPERATIONS) & ADJACENT (INCENDIARY WASHOUT) LAGOONS

SITE DESCRIPTION

Washout of incendiary munitions occurred in Building S-554 from the 1940s to the late 1950s. Munitions were demilitarized in Building S-554. Wastewaters from the operations were channeled to a concrete drain that divided the flow equally between the six adjacent concrete washout basins (totaling ~40 x 60 x 15ft deep).

This site has undergone a Phase I RFI. The only contamination found was some TCLP-positive (barium) sludge in the concrete basins.

The Phase II RFI was completed in December 2002. The final CMS was submitted in March 04. Basin was backfilled in summer 2004. Groundwater samples, taken in FY04, did not detect any contaminants of concern.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: High

PROGRAM: IR

CONTAMINANTS OF CONCERN:
Metals

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	199404
DES	199507	199608
CMI(C)	199611	200408

RC Date: 200412

CLEANUP STRATEGY

Groundwater sampling at this site has been removed beginning FY05. NFA expected in FY06. Future funding for this site will be covered under TEAD(S)-17, SWMU 26.

TEAD(S)-17, SWMU 26
SANITARY LANDFILL

SITE DESCRIPTION

The 44-acre landfill was used from 1956 to 1980. Currently, the landfill is fully covered and is not accepting any waste material.

The Phase I RFI found low levels of VOCs in groundwater. Because wastes remain buried, long-term groundwater monitoring is recommended.

TCA, below the MCL, has been detected in the downgradient well.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: Low

PROGRAM: IR

CONTAMINANTS OF CONCERN: VOCs

MEDIA OF CONCERN: Groundwater

PHASES	Start	End
PA	197912	198812
SI	197912	198812
RI/FS	198708	199404
LTM	199410	201509

RC Date: 199404

CLEANUP STRATEGY

LTM will continue under installation-wide groundwater monitoring program (cost assumes that LTM will end in 2024) which includes Sites 01, 02, 03, 05, 09, 22, 23, 25 and 29. Additional investigation to determine the extent of TCA impact will be conducted in FY06 (funded).

TEAD(S)-22, SWMU 25
WESTERN DEMIL AREA (DISPOSAL PITS)

SITE DESCRIPTION

A variety of demilitarization and disposal activities were conducted at this 1,105 acre, fenced SWMU from 1945 to 1978 along the southern fence line of the installation. The western part of the SWMU is occupied by approximately 50 burial pits, each about 3.5 acres. The pits were created by numerous superimposed explosion craters (from former OB/OD activity). The eastern part of the SWMU contains numerous covered munitions, burn smudges, and disposal trenches.

Limited sampling identified metals and VOCs in the soil.

Carbon tetrachloride has been detected in the groundwater.

A site survey within the SWMU boundaries was completed in FY03.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: Medium

PROGRAM: IR

CONTAMINANTS OF CONCERN:
Explosives, Chemical Munitions, VOCs, SVOCs, Carbon Tetrachloride

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200809

RC Date: 200809

Conducted an off-post survey for UXO and debris (~35 acres) in FY05.

CLEANUP STRATEGY

Groundwater monitoring will continue under the installation-wide groundwater monitoring program. Future funding for this site will be covered under TEAD(S)-017, SWMU 26. Conduct soil gas sampling (funded) and install six additional wells (programmed FY07).

Then this site will be transferred to the Military Munitions Response Program (as DCD-006-R-01) and the UXO will be addressed under that program.

TEAD(S)-23, SWMU 30
CAMDS LANDFILL

SITE DESCRIPTION

This site was used from the mid-1950s to the early 1970s as a disposal area (~0.5 acre). Wood and dunnage were burned in three trenches, which were backfilled when disposal operations ceased. After the CAMDS Facility (SWMU 13) was built in 1979, the eastern portion of SWMU 30 was used for disposal of construction debris, including dirt, concrete, asphalt and PVC pipe.

The Phase II RFI found low levels of arsenic in soil.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: Low

PROGRAM: IR

CONTAMINANTS OF CONCERN:
Metals

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI/CMS	198708	200109
DES	200106	200208
CMI(C)	200209	200306

RC Date: 200306

CLEANUP STRATEGY

Warning signs will be placed at the site (planned for summer 2006). Groundwater monitoring will continue under installation-wide groundwater monitoring program. Future funding for this site will be covered under TEAD(S)-17, SWMU 26.

TEAD(S)-28, SWMU 19
BUILDING 533 (EMPTY DRUM STORAGE)

SITE DESCRIPTION

Building 533 was formerly used for railroad car maintenance and drum storage. This site is located next to the Deactivation Furnace (TEAD[S]-14, SWMU 17). Although there is limited information on the wastes which have been stored in Building 533, trash, wood, empty brass shell casings, 5-gallon paint containers, and drums were observed at the site. The building was torn down in December 1991, but the concrete foundation is still remaining.

The Phase I RFI found low levels of PCBs in the water collected from a sump. Organics, PCBs and metals were detected in the soil. Low levels of TCE/organics were found in the groundwater.

A draft Work Plan was approved in early FY03. The septic tank was backfilled in summer 2004. Groundwater samples were taken and no contaminants were detected. A Human Health Risk Assessment is being prepared for this site.

STATUS

REGULATORY DRIVER: RCRA-C

RRSE RATING: High

PROGRAM: IR

CONTAMINANTS OF CONCERN:
PCBs, Organics, Metals

MEDIA OF CONCERN:
Soil, Groundwater

PHASES	Start	End
RFA	197912	198812
CS	197912	198812
RFI	198708	200209
DES	200206	200305
CMI(C)	200306	200412

RC Date: 200412

CLEANUP STRATEGY

Groundwater monitoring will continue under installation-wide groundwater monitoring program. Future funding for this site will be covered under TEAD(S)-17, SWMU 26.

IRP No Further Action Sites Summary

AEDB-R #	Site Title	Documentation/Reason for NFA	NFA Date
TEAD(S)-08 SWMU 36	Building 3200 & Surrounding Area	Phase I RFI indicate no contamination	199404
TEAD(S)-11 SWMU 11	Area 10 (Chemical Munitions Storage Area)	Not eligible for ER,A, Closure under RCRA permit	200109
TEAD(S)-12 SWMU 13	CAMDS Site Facility	Being addressed under CC	200109
TEAD(S)-13 SWMU 15	Old Demolition Pit (Under Bldg C4002)	Being addressed under MMRP	199404
TEAD(S)-14 SWMU 17	Deactivation Furnace	Remedial activities complete	200409
TEAD(S)-16 SWMU 23	Demilitarization Holding Area (North of SWMU 1)	Phase I RFI indicated no evidence of contamination release. Now a portion of OB/OD area	199404
TEAD(S)-18 SWMU 27	STP & Lagoon (Plating Shop Tanks & Sumps)	Phase I RFI indicated no significant contamination	199404
TEAD(S)-19 SWMU 28	Landfill, Closed	Phase I RFI results NFA.	199404
TEAD(S)-20 SWMU 29	Landfill, Metal Scrap	Surface solid waste scrap metal debris were removed.	199812
TEAD(S)-21 SWMU 32	Railroad Scrap Yard	Phase I RFI indicated no significant potential for contamination release	199404
TEAD(S)-24 SWMU 31	Inactive OB/OD Area	Not eligible for ER,A. Closure under RCRA permit.	199908
TEAD(S)-26 SWMU 8	Surveillance Test Site	Remedial activities were competed	200309
TEAD(S)-27 SWMU 14	Building S-108 (Former Motor Pool)	Phase I RFI indicated no need for additional investigation	199404
TEAD(S)-28 SWMU 19	Building 533 (Empty Drum Storage)	Remedial activities were competed	200412
TEAD(S)-29 SWMU 20	Building 520 (Crating Facility)	Remedial activities were competed	200112
TEAD(S)-30 SWMU 33	Building 536 (CAMDS Salt Storage)	Not eligible for ER,A. Closure under RCRA permit.	200109
TEAD(S)-31 SWMU 34	Building 4105 (Carton Storage)	Closed under RCRA Permit	199404
TEAD(S)-32 SWMU 37	Slag Piles (& Bomb Fragments)	Remedial activities were competed	200309

IRP Schedule

Initiation of IRP: 1979

Past Phase Completion Milestones

Because the SWMUs are divided into known releases and suspected releases units, there are two schedules in the DCD Corrective Action Permit. In addition, due to schedule and funding reasons, the 13 suspected releases SWMUs which require a Phase II RFI have been further divided into three groups, each with its own schedule. For the Known Releases Units, the Phase I and II RFI , and the CMS were completed. For the Suspected Releases Units, the Phase I and II RFI, and the CMS were also completed. Due to the potential agent/UXO threat the Group 1 SWMUs, the RFI is currently "on hold".

For a schedule of the IRP work completed to date at DCD, see below.

Site Wide Studies	Completion Date
Initial Installation Assessment	Dec 79
Exploratory Survey	Oct 82
PA/SI	Dec 88
RI	Jan 91
Known Release	
Phase I RFI	Mar 90
Phase II RFI	Oct 97
CMS Work Plan	Oct 99
CMS and DD	Sep 01
Suspected Releases	
Phase I RFI	Apr 94
Group 1 Interim Phase II RFI	Dec 95
Group 2 Phase II RFI	Aug 99
Group 3 Phase II RFI	Aug 01
Group 2 CMS and DD	Apr 02
CMS and DD for SWMU 11	Dec 01
CMS and DD for SWMU 20	Nov 01
CMS and DD for SWMU 33	Aug 02
CMS and DD for SWMU 37	Aug 02
CMS and DD for SWMU 19	Oct 02

Projected Record of Decision (ROD)/Decision Document (DD) Approval Dates: None

Schedule for Next Five Year Review: None

Estimated Completion Date of IRP (including LTM phase): 2037

Deseret Chemical Depot IRP Schedule

(Based on current funding constraints)

AEDB-R #	Phase	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
TEAD(S)-01	RFI/CMS									
TEAD(S)-03	CMI(C)									
TEAD(S)-17	LTM									*201509*
TEAD(S)-22	RFI/CMS									

Prior Years Funds

Total Funding up to FY04: $20,872K

Year	Site Information		Expenditures	FY Total
FY05	TEAD(S)-01	RI	$241.9K	
	TEAD(S)-03	RAC	$11.8K	
	TEAD(S)-05	LTM	$12.8K	
	TEAD(S)-09	LTM	$12.8K	
	TEAD(S)-17	LTM	$572.0K	
	TEAD(S)-22	RI	$221.0K	
	TEAD(S)-23	LTM	$12.7K	$**1,085K**

Total Prior Year Funding: $ 21,957K

Current Year Funds

Year	Site Information	Requirements	FY Total
FY06		$0	**$0**

Total Funding FY06: $0

Total Future Requirements: **$ 1,134K**

Total IR Program Cost *(from inception to completion of the IRP):* **$23,091K**

DESERET CHEMICAL DEPOT

Military Munitions Response Program

MMRP Summary

Total AEDB-R MMRP Sites / AEDB-R Sites with Response Complete: 5/0

AEDB-R Site Types
5 Unexploded Munitions/Ordnance

Most Widespread Contaminants of Concern: UXO

Media Of Concern: Soil

Completed REM/IRA/RA: None

Total MMRP Funding

Prior Years (up to FY05):	$ 273K
Current Year (FY06):	$ 12K
Future Requirements (FY07+):	$185,290K
Total:	$185,575K

Duration of MMRP
Year of MMRP Inception: 2003
Year of MMRP RC: 2017
Year of MMRP Completion Including LTM: 2047

MMRP Contamination Assessment

MMRP Contamination Assessment Overview

The Department of Defense (DoD) has established the MMRP under Defense Environmental Restoration Program (DERP) to address DoD sites with munitions and explosives of concern (MEC) including unexploded ordnance (UXO), discarded military munitions (DMM), and munitions constituents (MC).

The US Army's inventory of Closed, Transferring, and Transferred (CTT) Military ranges and sites, has identified sites eligible for action under MMRP. The MMRP eligible sites include other than operational ranges where UXO, DMM and MC is known or suspected and the release occurred prior to September 30, 2002. Properties classified as operational ranges are not eligible and, therefore, are excluded from the MMRP program.

The process began with three phases of range inventories. Phase 1 consisted of installations completing an initial data call. USAEC managed the implementation Phases 2 and 3 of the MMRP inventory.

The Phase 2 inventory dealt with active and inactive range considerations. The Phase 3 Army Range Inventory identified five sites as eligible for the MMRP. The Phase 3 inventory serves as the PA under CERCLA. The SI was completed in 2005.

Cleanup Exit Strategy:

An RI/FS is planned to include the installation of groundwater monitoring wells. In addition, a MEC site characterization and removal assessment and a MC soil excavation and MEC removal action is expected. Institutional Controls and MEC monitoring will follow.

Previous Studies

1993
- Final Report RFT Phase I, Ebasco, July

1995
- Interim Final RFI Report for SWMU 1 and 25, Ebasco, November

2003
- Final US Army Closed, Transferring, and Transferred Range/Site Inventory, Techlaw, January

2005
- Final Historical Record Review, Techlaw, April
- Final Site Inspection Report, Techlaw, December

DESERET CHEMICAL DEPOT

Military Munitions Response Program

Site Descriptions

DCD-001-R-01
COMBAT TRAINING AREA

SITE DESCRIPTION

The closed Combat Training Area is located in north-central DCD and encompasses approximately 59 acres. The US Chemical Corps built the training area in the 1940s and used it until the 1950s. It consisted of a handgun range, a combat assault course, a 500-yard rifle range, a hand grenade range, and a rifle grenade/bazooka range. Only practice munitions were utilized on this former range. The hand grenades did include spotting charges. There was also a mortar range where dummy rounds were used. The range was open to civilians during the 1950s and 1960s on an annual basis to sight hunting weapons.

The combat assault course consisted of machine guns, at fixed positions, which were fired over soldiers while they crawled under barbed wire. Soldiers also maneuvered around explosives detonated within the combat assault course. Typically these explosives would have consisted of either M80 firecrackers or Mark 2 firecrackers; hand thrown simulators, such as the Simulator, Hand Grenade, M116A1; Simulator, Explosive Booby Trap Flash, M117; Simulator, Projectile Ground Burst, M115A2; and other newer simulators. All of these are considered pyrotechnics and generally have less that 1/4-pound of flash powder similar to that in a firecracker.

The National Guard and the DCD security force used the Combat Training Area throughout the 1970s for rifle and shotgun training. Today, remaining remnants of the former range consist of machine gun mounts, an old tank that was used for target practice, and berms and U-shaped boxes from the hand grenade course. Although a fire was used to clear the site in 1997 (the fire was accidental, it was assumed that any surface UXO was cleared, but not confirmed) and the staff at DCD assumed that any UXO would have burned, DCD conducted a surface clearance in 1997 of the Combat Training Area. The site remains otherwise undeveloped. The SI was completed in FY05, and site was recommended for further investigation.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: 2 **-** Serious

PROGRAM: MMR

CONTAMINANTS OF CONCERN: MEC

MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	200209	200305
SI	200407	200510
RI/FS	200910	201009
RD	201410	201509
RA(C)	201510	201609
LTM	201710	204709

RC Date: 201609

CLEANUP STRATEGY

Additional investigation is planned. Removal of soil and debris, and institutional controls will be implemented. MEC monitoring may be needed.

DCD-002-R-01
EASTERN DEMIL/DISPOSAL PITS (PAGE 1 OF 2)

SITE DESCRIPTION

This closed site is located in the southeastern portion of DCD, along the southern fence of the installation. Approximately 308 acres of the Eastern Demil/Disposal Pits, which totals 373 acres, are located in the non-operational portion of DCD. The remaining portion of the site extends into the operational area. The US Army Toxic and Hazardous Materials Agency (USATHAMA) reported that approximately 59,000 empty 4.2-inch mortar projectiles were identified in a disposal pit on site. According to a 1993 report by the US Army Chemical Materiel Destruction Agency, this site contains two sites identified as Non-Stockpile Chemical Agent sites. They are listed as the "Disposal" and "Mortar Pit" sites.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: 2 **-** Serious

PROGRAM: MMR

CONTAMINANTS OF CONCERN: MEC

MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	200209	200305
SI	200407	200510
RI/FS	200810	201409
RD	201410	101509
RA(C)	201510	201609
LTM	201610	204609

RC Date: 201609

The Eastern Demil/Disposal Pits site was used as a detonation site for conventional munitions (i.e. mortars and bombs) and a burial site for explosive and chemical munitions. Mortars and bursters were transported in egg crates. Energetics were removed from the munitions, the rounds were then thrown into pits and burned. Afterwards, the scrap was removed and buried elsewhere. Ordnance scrap and the potential for surface UXO remain. The site was also used as a disposal area for incendiary and chemical (chiefly mustard-filled) munitions and explosives as evidenced by the 130 remaining disposal pits. Each pit contained approximately 60,000 rounds. In addition, bombs were demilitarized at the site. They were shot with armor piercing rounds, which allowed the chemical agent to drain. Everything was then burned. German GB (Sarin) bombs were also demilitarized on site.

Mustard agent-burning operations reportedly occurred in the northeastern portion of this site. Although most of the munitions buried in the pits were reportedly burned prior to burial, it is suspected that mustard munitions were disposed of without prior burning. Although the majority of the activity took place during the 1950s, the site was operational between 1945 and 1978. According to an October 1995 Draft Groundwater Monitoring Report, a hard, green residue resembling soapstone was observed, which suggested that napalm may have been used to facilitate crate burning on the site.

As part of the IRP, an Installation Action Plan, dated November 2001, was prepared and it was noted that there is a potential for "agent" contaminated materials and UXO below the surface of the burial pits. In addition, an Interim RCRA Facility Investigation (RFI) Report was prepared that included some minimal sampling, but no UXO responses were

EASTERN DEMIL/DISPOSAL PITS

conducted and no additional work has been conducted due to the potential for extreme hazards at the site. The Natural and Cultural Resource Program Manager stated that the site would not be remediated due to the potentially high levels of explosives and chemical agents present. The area is fenced. The site is currently undeveloped.

CLEANUP STRATEGY

Additional investigation is planned. Capping isolated areas, with institutional controls, may be needed.

DCD-003-R-01
GRAVEL PIT AREA

SITE DESCRIPTION

The Gravel Pit Area is located in west-central DCD. This closed site encompasses approximately 1 acre. The Gravel Pit was reportedly used as a burial site for explosive and chemical munitions. The Cultural Resources Program Manager estimated that the pit was utilized between 1950 and 1959. The pit contains various UXO items that were first buried in gravel and then covered in soil. The contents of the gravel pit were not demilitarized prior to their burial. The site reportedly contains M2 ignition cartridges, squibs, hand grenades, blasting caps, M21 incendiary bomb clusters, TNT (2,4,6-Trinitrotoluene) blocks, M74 incendiary bombs, and M19 incendiary bomb clusters. It may also contain FS (Sulfur trioxide-chlorosulfonic acid) smoke (bottled), and mustard.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: 2 - Serious

PROGRAM: MMR

CONTAMINANTS OF CONCERN: MEC

MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	200209	200305
SI	200407	200510
RI/FS	201410	201509
RD	201510	201609
RA(C)	201610	201709
LTM	201710	204709

RC Date: 201709

Although the pit is an IRP site, the IRP project does not address UXO, only chemical munitions, agents, and explosives. Phase 1 RCRA Facility Investigation (RFI) samples found no contamination in the surface soil samples and groundwater testing revealed no releases. According to a 1993 report by the US Army Chemical Materiel Destruction Agency, this site contains one site identified as a Non-Stockpile Chemical Agent site. It is listed as the “Gravel Pit” site, there have been no known UXO responses at this site and there are no plans to clean this area. The site is fenced and undeveloped.

CLEANUP STRATEGY

Additional investigation is planned. Capping, with institutional controls, may be needed.

DCD-004-R-01
OLD DEMOLITION PIT

SITE DESCRIPTION

A former, long-time DCD employee stated that although this closed site is referred to as a demolition site; it was actually a munitions storage area. The site is located south of Storage Area 9, in central DCD. The estimated size of this site is 712 acres. According to a July 1993 report of Suspected Releases, and a November 2001 Installation Action Plan (IAP), a large, accidental explosion of 4.2-inch high explosive shells occurred at this site in the late 1940s. Although it was assumed that the explosion would have demilitarized the shells, this has not been confirmed. The crater resulting from the explosion has been filled. The DCD employee also recalled the explosion.

The actual pit is 0.44 acres. It has not been confirmed that this was an accidental explosion. It was estimated that the kick-out from the explosion could have extended as far as 3,150 feet, based on information provided in the DOD Ammunition and Explosives Safety Standards, dated July 1999. Consequently, this area was included within the boundaries for this site. According to the IAP, the only contaminant of concern was UXO. No contamination was detected during the Phase I RFI and no further action is planned for environmental considerations. There have been no known UXO responses at this site. Warehouse C4002 was built over the detonation pit. The construction date is unknown. The warehouse was demolished in 1996, leaving only the concrete slab foundation. The site is undeveloped.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: 2 **-** Serious

PROGRAM: MMR

CONTAMINANTS OF CONCERN: MEC

MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	200209	200305
SI	200407	200510
RI	200910	201009
RD	201210	201304
RA(C)	201305	201409
LTM	201710	204709

RC Date: 201409

CLEANUP STRATEGY

Additional investigation is planned. Removal of soil and debris, with institutional controls may be needed.

DCD-006-R-01
WESTERN DEMIL AREA/DISPOSAL PITS (PAGE 1 OF 2)

SITE DESCRIPTION

This closed site contained ash mounds, high-explosive detonation craters, and windrows. The site is located on the south-central boundary of DCD and is comprised of approximately 1,105 acres. According to the IAP, the site was utilized between 1945 and 1978.

The ash mounds are located on the northeastern portion of the site. They contain shrapnel and scrap metal. According to the IAP, the mounds may be the result of burning incendiary components of cluster bombs, burning incendiary munitions washout from the Incendiary Washout Operation in Building 554 and Incendiary Washout Ponds, or burning chemical agents such as riot control agents. Former DCD personnel stated that the mounds were probably the result of the burning and burial of chemical agents.

STATUS

REGULATORY DRIVER: CERCLA

RAC SCORE: 2 - Serious

PROGRAM: MMR

CONTAMINANTS OF COCERN: UXO

MEDIA OF CONCERN: Soil

PHASES	Start	End
PA	200209	200305
SI	200407	200510
RI	200810	201409
RD	201410	201509
RA(C)	201510	201609
LTM	201610	204609

RC Date: 201609

The pits were comprised of approximately 50 clusters of high-explosive detonation craters located on the western portion of the site. The craters were formed by the superimposed open detonation of high-explosive conventional munitions. Approximately 10,000 to 15,000 pounds of munitions were detonated at one time. Each cluster measured approximately 3.5 acres. The craters were closed by backfilling between 1987 and 1990.

The windrows are located in the north-central portion of the site and are composed of two long piles of scrap metal. They contain cluster bomb tail sections, cluster bars, nose plates, hangers, fire bomb casings, and M-50 type thermate bombs, some of which reportedly still contain live explosive charges. Residual bomb and cluster parts from demilitarization activities in Building S-554 were reportedly buried here. Operational procedures at the windrows involved placing scrap metal from the incendiary cluster bombs in trenches, dousing them with fuel, and burning them. According to the USATHAMA, some of the M-50 bombs found in the windrows still have live explosive S-charges. A 1990 site visit reportedly uncovered small amounts of bulk trinitol (a secondary explosive) on the ground. The trinitol located at the site would be considered a munitions constituent.

At one time, there was an attempt to clear this area. Piles of dirt and scrap were dumped on tables. A magnet was then drawn over the scrap and the metal was removed. The Explosive and Ordnance Disposal (EOD) team was called to remove any UXO. This plan was abandoned due to the concentration of UXO. The site is presently fenced. There

WESTERN DEMIL AREA/DISPOSAL PITS (PAGE 2 OF 2)

have been no other known UXO responses at this site. The ash mounds and windrows are still evident and the site is currently undeveloped.

CLEANUP STRATEGY

Additional investigation is planned. Capping of isolated areas, with institutional controls, may be needed.

MMRP Schedule

Initiation of MMRP: 2003

Past Phase Completion Milestones

2003
PA completion at DCD-001-R-01, 002, 003, 004, 006 – May

2005
SI completion at DCD-001-R-01, 002, 003, 004, 006 - October

Projected ROD/DD Approval Dates: 2015+

Projected Construction Completion: 2017

Schedule for Five Year Reviews: None

Estimated Completion Date of MMRP including LTM: 2047

Deseret Chemical Depot MMRP Schedule

(Based on current funding)

AEDB-R#	Phase	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15+
DCD-001-R-01	RIFS									
	RD									*201509*
	RA(C)									*201609*
	LTM									*204709*
DCD-002-R-01	RIFS									
	RD									*201509*
	RA(C)									*201609*
	LTM									*204609*
DCD-003-R-01	RIFS									*201509*
	RD									*201609*
	RA(C)									*201709*
	LTM									*204709*
DCD-004-R-01	RIFS									
	RD									
	RA(C)									
	LTM									*204709*
DCD-006-R-01	RIFS									
	RD									*201509*
	RA(C)									*201609*
	LTM									*204609*

Prior Years Funds

Total Funding up to FY04: $243.5K

Year	Site Information	Expenditures	FY Total
FY05		$29.5K	**$29.5K**

Total Funding up to FY05: $273K

Current Year Funds

Year	Site Information	Expenditures	FY Total
FY06		$12K	**$12K**

Total Future Requirements: **$185,290K**

Total MMR Program Cost *(from inception to completion of the MMRP):* **$185,575K**

Community Involvement

The vicinity of Deseret Chemical Depot (DCD) includes the town of Clover, St. John, Faust, Ophir, Vernon, Big Hollow, Hogans Ranch, and Stockton, have a combined population of approximately 1,200. The main community, Tooele, located about 20 miles north of the depot and has a population of more than 28,000 residents. A Technical Review Committee (TRC) was originally formed in February 1988 when the depot, called TEAD South Area, was part of Tooele Army Depot (TEAD). In FY96, the depot became a separate installation and established its own TRC to continually address the depot restoration concerns. The committee includes representatives of the Army, the US Environmental Protection Agency (EPA) Region 8, the Utah Department of Environmental Quality, Utah State University, and Tooele county residents.

With the determination of the installation commander, the TRC was converted to a Restoration Advisory Board (RAB). The first public meeting was conducted in September 1998 to introduce to the potential interest the RAB formation. The first RAB meeting was held in January 1999.

Community Relations Plan

DCD's Community Relation Plan was updated in 1999. This plan was originally prepared in 1994 combining both the Tooele Army Depot (TEAD) north and south areas. This plan includes sections on previous site information, site history, current missions, proposed projects, past community communications, key community concerns, public participation activities and implementation, environmental concerns, etc.